

AGS/RHIC SHUTDOWN SCHEDULE(rev. 1)

R. Zaharatos – Jan. 28, 2003, 1530HRS

**SHUTDOWN PERIOD: 0800 WEDS., JAN 29, 2003, TO THURS., JAN. 30, 2003
2200HRS(SYSTEMS READY FOR BEAM) NOTE: THE RHIC STORE MAY BE
MAINTAINED TO NO LATER THEN 1000 ON WEDS..**

**BOOSTER POL. PROTONS BEAM STUDY BEGINS 0800HRS.
THURSDAY**

**AGS RING RESTRICTED ACCESS ENTRIES PERIOD – Weds. 0800-1630
NOTE; COOLING TOWER 1 OFF LINE FOR CLEANING 0700 WED.
FOR(6HRS)**

“U” UP/DWN RESTRICTED ACCESS – WEDS. 0800-1630

**BOOSTER RING RESTRICTED ACCESS ENTRIES PERIOD – Weds. 0800-
1630 .**

**RHIC TUNNEL AND IR's –RESTRICTED ACCESS AT END OF STORE –
0800 or NO LATER THEN 1000 Weds. to THURS. 1300(BEGIN SWEEPS). All
sweeps completed by 2100 on Thursday– HP surveys required for beam dump
and injection line**
**PHOBOS MAIN MAG. WATER SYS. OFF TO REPLACE MOTOR. WEDS.
4HRS**

BAF STUB TUNNEL RESTRICTED ACCESS – WEDS. 1000 TO 1600

LINAC/HEBT – WEDS 0830 TO 1630.

PRIMAY JOBS:

JOBS STATUS CODE: C complete IP in-process RS reschedule CAN
cancelled
* additions

RHIC POWER SUPPLY TESTING – Scheduled to begin at the end of the first days
work period and will continue until turn on. This requires that all P.S. work,
controls interruptions, and related jobs be completed on Weds. to avoid
interrupting the testing.

**RF SECTOR 4 – MUST BE SECURED AND READY FOR INITIAL TESTING
ON WEDS. BY 1400HRS**

AGS RING ACCESS JOBS

- 1. Investigate chamber gnd. problems at A4, and L18(Bm. Comp.)
- CAN 2. Reconfigure brackets for RF gap short relays
- 3. Main Magnet serial number inventory(M. Hemmer)
- 4. K3 PUE – replace cable
- 5. Test Ring exhaust fans(AC Grp)
- 6. Check problem with C-5 IPM turbo pump(Vacu)
- 7. Remove crashed turbo/install and test new turbo at E7
- 8. Tune Meter maintenance(Pulsed Pwr.)
- 9. A10 AC Dipolde set-up(Pulsed Pwr.)
- 10. Check C20 Polarimeter Targets
- 11. Check A20 Flying Wire Targets
- 12. C5 IPM – verify and test servo

AGS EXTERNAL

- 1. Siemen's M/G – remove all covers for inspection. Clean M/G as required.
- 2. D Fan Hse. – relamp
- 3. Access Controls - add gate not reset to South Gate Simultaneous Release
- 4. Access Controls – add Restricted Access contacts to N. Gate Reset
- 5. A10 House – verify circuits to breaker panel(Elect)
- 6. L18A Hse. – F6/F10 maint. for mode switching problem
- 7. Commission new AGS timing sequencers for Pol. Protons(Skelly)

BOOSTER RING ACCESS JOBS

- 1. Replace emergency light batteries at plug door
- 2. Check and drain air lines
- 3. BPM's – check cable routing for E5, E7, and E8
- 4. Visual check of Ti pumps in "D" sector....attach labels.

BOOSTER EXTERNAL

- 1. Check Bldg. 914 Pump Hse. spare air compressor unit
- 2. Check problem with BXT.VS9

BAF STUB TUNNEL

- 1. Visual check of fast valve sensor....take pictures

BAF EXTERNAL

1. Install BAF beam permit modules in fiber optic chassis(914, 930U, 930A, and 911B)
2. Install V202 in 957-inst1 for board testing
3. Bldg. 958 heating – check heaters at outdoor A/C units inside berm fence

ATR ACCESS JOBS

1. Drain air lines (FES)
2. Check/clean remainder of P.S. water flow switches(FES)

LINAC/HEBT ACCESS JOBS

1. HEBT soil sample

LINAC EXTERNAL

- | | |
|-----------|--|
| | 1. Replace breaker in Polarized Solenoid |
| IP | 2. Recertification of BLIP interlocks to Linac |

RHIC ACCESS JOBS

1. P.S.'s – repairs(See List)
2. Stochastic Cooling(sect. 1 & 2) – commissioning(Gassner)
3. 1008 – install contactors and switches (FES – Pearson)-2 broken switches
4. Inspect entire tunnel for condition of ice balls.(Zapasek)
5. Cryo – continue installation of temperature monitors in sector 4-Rack at 4Q6 which covers sects.4 & 5.(4-6hrs Kollmar) 1 temp. mon. bad-need 1hr
6. Network communications – replace network switch in 7C(Popken)
7. Cryo, snakes and spin rotators – adjust zero ref. for lead flows. Sectors 3, 4, 5, 6, 8, and 9.(1/2 hr per sect., Kollmar)

Vacuum Systems:

8. Perform localized bakeout of Argonne E-detector at Bi1(24hrs)
9. Replace Yi7Q21 cold cathode gauge
10. Relace G2pi2 cold cathode gauge
11. Replace UPS batteries at Yi3pi2
12. Move turbo from Bo7-4.1 and install at Y5Q6....test
13. Move turbo from Bi5-Q6 and install at Bi5-Q4....test
14. Add air line for turbo valve at Bi5-Q4
15. Replace gauges: Cryostat – Bi12-cc-pi21, bi4-cc-pi21, g11-cc-pix.1
Turbo – g3-tmp-pi1 cc1, g7-tmp-pi1 cc1, g11-tmp-pi1

cc1

16 Check and drain air lines

- 17 Hodoscopes in sect. 12 – continue testing and set-up(Bm. Inst.)
- 18 Roman Pots in sects. 1 & 2 – repairs and modifications(Bm. Inst.)
- 19 Electron Detectors in sects. 1, 2, & 12 – testing and ampl. work(Bm. Inst.)
- 20 Luminosity Monitor in sect. 12 – start set-up for upcoming work(Bm. Inst.)
- 21 Network communications – move network equip. over to UPS power at 1004B. Locations affected: 1004B, 1004A, alcoves 3C, 5A, and 5B
- 22 AC Dipole – remove/inspect/repair all Power Amplifiers from Horiz. and Vert. supplies
- 23 Injection Kicker – swap out Yellow #4, Sect. 5
- 24 Ground cable tray near Common Cavity in sect. 1004(Elect)
- 25 Yellow Abort Kickers – inspect/maint.(Pulsed Pwr.)
- 26 Replace O9Q17 lead heater thermostat(PK)
- 27 Replace sector 5 rotator lead heater thermostats(PK)
- 28 RF - set limiters on all QEI's for the acceleration systems
- 29 RF – check to see if BS3.2 phase shifter is at the limit
- 30 RF – replace tube for Acceleration B3.2
- 31 Install IFE's for beam position electronics in the pairs of rotators(one ylw, one blu) in sectors 5,6,7,and 8.(HF Inst.)
- 32 Install IFE's at Snakes between Q7 and Q8 in sector 3 and one in sector 9. (HF Inst.)
- 33 Perform PM's on alcove A/C units
- 34 Perform PM's on fire alarms in sectors 10&12.

RHIC EXTERNAL

1. Power supplies. See P.S. List

CONTROLS:

2. Replace chassis cfe-21-wcm1 at 1002A
3. Change V108 firmware in all RF chassis(1004A) and instrumentation chassis in 1002A
4. All service buildings – complete the moving of all controls VME over to UPS

5. Install heat trace at PHENIX and PHOBOS(Elect.)
6. Injection Kicker – replace magnet support(1005/Pulsed Pwr.)
7. PHOBOS – replace pump motor bearing on MM cooling system
8. Bldg. 1006 – troubleshoot problem with 3 p.s. differential switches
9. Bldg. 1010 – repair tower basin leaks

RHIC POWER SUPPLIES(Bruno)

Maintenance to do for next Maintenance Day

IR Power Supplies

1. If 6b yellow trips return then we may want to remove the permit module interface chassis again and replace it with one that has all LEMO connectors in it. **NO ONE**
2. Ice Ball checking. **First Day: Joe D and Ron Z**
3. In 1002B and 1010A possible work on y2-dh0, yi10-dh0 and yo9-dh0 regarding this fiber optic interface card problem. I think we should put a 1 ohm resistor in place of 5K resistor of y2-dh0-ps since that is the only one of the three that has shown some change in the difference between the DAC out and setpoint. **First Day: Joe will set up card for Don and then go onto ice ball checking.**
4. In 1006B keep an eye out for any trips of y6-dh0. We had one on Thurs 12/19 at around 11:56 pm due to voltage spike and we want to see if it comes back. Gregg reseated some hkps connectors and it has not come back since. **NO ONE YET.**
5. In 1012A the node card cable from bi12-tq6-ps to the node card should be replaced with a longer one. It should be about 15 feet long. We also will probably swap out the p.s. since the false ESI fault is back. **First Day: Tom and Don**
6. In the service buildings we will have many, many crews going into 14 QPA's to install a daughter board on the blue dhx and dh0 QPA's as well as cabling and a possible EEPROM change on those QPA controller cards. **First Day: Rich K and Jeff in one team and then Rich C and Gregg in another team, as others get freed up we will get more teams on this (Tom and Joe).**
7. In the tunnel take a sample of green stuff from Power leads on magnets. **NO ONE.**
8. In 1010A, if there is time we may want to check more tq power supplies for shorted IGBT's by looking at the AC current during a turn ON. **NO ONE.**
9. Re-Connect Red Lead of 7DX magnet on magnet tree. We believe this is the warm up heater cable and gets connected to terminal number 1. Confirm with George and Gregg. See Photos. **First Day: Paul Ribaud &**
10. Go to magnet O9Q17 and replace the thermostat. PK jumpered it out on 1/21/03 with Joe D. Enter at 1010A and make a left and it is a yellow magnet. **First Day: PK and Bob McCarthy**
11. Test of new Q6 current regulator card Time Constant: Second Day: Don

Spin Rotator Magnet Work

1. In the tunnel the wiring for the warm up heaters for the spin rotators must be completed. **4 guys from 902A.**

Corrector Power Supplies

1. In alcove 3A **bo2-octf-ps** shall be replaced because it has dropped to the OFF state. Possibly replace **yo8-th2-ps** because it tripped to the OFF state on 1/19/03 at 17:29. Possibly replace **yo1-tv5-ps** because it tripped on an error fault on 1/19/03 at 18:08:40. Definitely replace **yi7-th3-ps** because it reports back "no p.s. illegal

state” or STBY-ERROR yet it is ON. **Yi11-th5-ps** tripped to the OFF state on 1/20/03 at 22:36:56, swap out, probably OFF pushbutton problem. **Bi8-octd-ps** tripped off on 1/21/03. **bi1-th7-ps** tripped OFF 1/21/03. **First Day: Brian and Gene.**

Gamma-T Power Supplies: **Second Day Joe and Fred plus Rich C and Gregg, maybe Jeff and Tom too. First Day: Tom and Don may start this.**

1. In the alcoves we may go back into the tunnel and either start soldering wires on fuseholders of Gamma-T p.s.’s or replace the slugs with 10A fuses. We don’t know which Gamma-T’s we will look at. It depends on how they behave between now and the next maintenance day. New Gamma-T’s that have tripped off are **bo10-qgt-ps** (1/17/03), **yi10-qgt-ps** (1/18/03 & 1/22/03) and **bi1-qgt-ps** (1/17/03), **bi5-qgt-ps** (1/22/03).
2. Also label Test Points on Power Chassis and cables to 3u chassis.
3. In the alcoves label Circuit Breakers of Gamma-T power supplies. Should label snake and spin rotator circuit breakers too.

Sextupole Power Supplies

1. In alcove 11B and a circuit breaker panel cover must be replaced properly by Costas and an electrician.

Main Power Supplies **Carl and Fred**

1. Possible work on PFN relay still.
2. Test “Regulator RESET” button on RSVIEW32.
3. Carl will test his new program that may eliminate pushing the “REG REST” button completely. It will be done automatically.
4. Adjustments to DC voltmeters.

ATR Power Supplies

1. Swap Circuit Breakers 42 and 44 in 1000P substation. Not definite yet.

Valve Box Work

1. Replace warning lights with LED’s on top of valve box. **Paul Ribaud &**

1010A qpaic A1-A2

1. Check k-locks on A1 to A2 qpaics in 1010A. **Wing &**

1006B quench detector work

1. Replace cable between qd1 and qd2 quench detectors. **Dan Oldham &**

Timing Resolver

- 1. Test new software in 1010A and if it works install it in all of the buildings. Wing &**